College Algebra

Description of the Examination

The Subject Examination in College Algebra covers material usually taught in a one-semester college course in algebra. About half the exam is made up of routine problems requiring basic algebraic skills; the remainder involves solving nonroutine problems in which candidates must demonstrate their understanding of concepts. The exam includes questions on basic algebraic operations; linear and quadratic equations, inequalities, and graphs; algebraic, exponential, and logarithmic functions; and miscellaneous other topics. It is assumed that the candidate is familiar with currently taught algebraic vocabulary, symbols, and notation. The exam places little emphasis on arithmetic calculations, and it does not contain any questions that require the use of a calculator. However, the use of a scientific calculator (nongraphing, nonprogrammable) is permitted during the exam.
The exam consists of approximately 70 multiple-choice questions to be answered in two separately timed 45-minute sections.

Knowledge and Skills Required

The subject matter covered by the College Algebra exam is distributed approximately as follows.

Approximate Percent of Examination	
25%	Algebraic operations
20%	Equations, inequalities, and their graphs
25%	Algebraic, exponential, and logarithmic functions and their graphs
30%	Miscellaneous topics

Within the subject matter described above, questions on the exam require candidates to demonstrate the abilities given below in the approximate proportions indicated.

- Solving routine, straightforward problems (about 50 percent of the exam)
- Solving nonroutine problems requiring an understanding of concepts and the application of skills and concepts (about 50 percent of the exam)

Approximate Percent of Examination 25% Algebraic operations

Combining algebraic expressions
Factoring
Simplifying algebraic fractions
Operating with powers and roots

20% Equations, inequalities, and their graphs

Linear equations and inequalities
Quadratic equations and inequalities
Systems of equations and inequalities

25% Algebraic, exponential, and logarithmic functions and their graphs

- Domain
- Range
- Composition
- Inverse of functions

30% Miscellaneous topics

- Theory of equations
- Sets
- Real numbers
- Complex numbers
- Sequences and series

Study Resources

To prepare for the College Algebra exam, you should study the contents of at least one college level algebra textbook. These textbooks can be found in most college bookstores. You would do well to consult two or three textbooks because they vary in content, approach, and emphasis. When selecting a textbook, check the table of contents against the "Knowledge and Skills Required" section.